

Psychological impact of COVID-19 Pandemic among health care providers

Nargis Iqbal, Faiza Nisar, Amna Rafique, Sumera Naseem, Iqbal Ahmad Azhar, M-Zia-ul-Miraj, Khulood Mukhtar, Nazia Nawaz, Nadia Khurshid, Najia Anjum

Abstract:

Objectives: To ascertain the prevalence of stress and anxiety disorders in Health Care Providers during Pandemic of COVID-19, and to provide appropriate suggestions to deal it.

Material and Methods: This Cross sectional study was conducted at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of three months from September 2020 to November 2020 after approval from Institutional Review Board (IRB). Non probability convenience sampling technique was used, a total of 100 willing Health Care Providers (doctors, nurses and paramedics) were included in the study. The data was collected by handing over “The 7- item Generalized Anxiety Disorder Scale (GAD-7)” performa, it was entered and then analyzed by SPSS version 23. This scale is from 1 to 21. i describes no anxiety and 21 severe anxiety.

Results: The total prevalence in health care providers (HCP) was 86%, 33% were suffering from mild anxiety, 48% and 5% were suffering from moderate and severe anxiety respectively, p-value was 0.041. The mean age of the participants was 29.86 years, the mean age of doctors, nurses and paramedical staff was 30.30, 34.07 and 35.90 years respectively. There were 55% female and 45% male.

Conclusions: Significantly high level of stress and anxiety disorders (86%) were found in health care providers during pandemic of COVID-19, doctors, nurses and paramedics are equally affected in the study. This is an alarming issue and need of the hour to deal both at government and community levels, in order to keep psychological wellbeing of all health care providers.

Keywords: COVID-19 pandemic, Health care providers, (junior doctors, nurses, Paramedical Staff), Psychological stress, anxiety, depression

Introduction:

In January 2020, World Health Organization (WHO) announced eruption of a current communicable Corona virus disease named (COVID-19), and it has globally spread rapidly causing infectious pneumonia. In March 2020, according to WHO assessment COVID-19 would be a pandemic problem in future.^{1,2} China is the first country who reported COVID-19 patients and according to China's National Health Commission report 49,824 COVID-19 patients are confirmed.³

The Government of China, health care provider

team and public are facing great pressure because of huge scale infectious disease.⁴ In Pakistan COVID-19 virus was reported first time on 26 February 2020, when report of the student confirmed positive of COVID-19 in Karachi when he came back from Iran.⁵ From 18 March 2020 onward COVID-19 positive patients had been registered in all provinces including Islamabad.⁶ COVID-19 a new disease has affected the attitude and behaviors of the general population and health care providers throughout the world and is responsible for different types of anxiety disorders.⁷⁻⁹ According to France report health care provider are at high risk 15%-18% of being

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Al-Aleem Medical College/Gulab Devi Educational Complex, Lahore.

N Iqbal

F Nisar

A Rafique

IA Azhar

MZ Miraj

K Mukhtar

N Nawaz

N Khurshid

N Anjum

Hamdard University Hospital, Karachi

S Naseem

Correspondence:

Dr. Nargis Iqbal

Associate Professor,

Department of Obstetrics

& Gynaecology

Al-Aleem Medical College,

Gulab Devi Medical

Educational Complex,

Lahore

Cell No: +92 300-8413004

email: dr.nargisqbal@

hotmail.com

Table 1: Demographic data (n=100)

Age Years	No of HCP	Percentage
21 - 30	42	42
31 - 40	36	36
> 40	22	22
Distribution		
Doctors	55	55
Nurses	21	21
Para Medical Staff	24	24
Sex of HCP		
Male	45	45
Female	55	55
Knowledge of COVID-19		
Yes	100	100
No	Zero	Zero

infected with COVID-19, and some reported up to 20%.¹⁰ In Pakistan, the number of HCP who had COVID-19 infection were 766,¹¹ of them lost their life, but the number has increased till now both physical and mental health.^{10,11} The morbidity and mortality because of COVID-19 has affected the health care providers a lot, in the well-developed and under-developed countries different preventive measures like use of mask, social distancing, quarantines, curfew, lockdown and death has been responsible for psychological disturbances in general population and in health care providers.¹² Because of the continuous increase in the number of COVID-19 patients, risk of being infection, increase work load, physical and mental exhaustion, lack of personal protective equipment's are responsible for changing the attitude and behaviors of health care providers.¹³ Research has established that HCP requested five things during pandemic of COVID-19 from their owners: "prepare me, hear me, support me, protect me, and care for me".¹⁴ The main objectives of the study was to find out the prevalence of stress and anxiety disorder in Health Care Providers (Junior-doctors, Nurses, and Paramedical-staff) of Gulab Devi Educational Complex attached with Al-Aleem medical college during pandemic of COVID-19, and to provide appropriate suggestions to deal the psychological impacts and implement policies to cope would be streamlined.

Material and Methods:

Across sectional study was conducted at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of two months from September 2020 to October 2020 after Ethical approval. Non-probability convenience sampling technique was used. Total 100 willing health care providers including junior doctors, nurses and paramedical were included in this study, unwilling health care providers were excluded. The data was collected by handing over "The 7-item Generalized Anxiety Disorder Scale (GAD-7)" performa to willing health care providers in different clinical departments after informed consent from them. The purpose of study, importance of anxiety disorders and how to fill the performa was explained in first 5-minutes. The filled performa's were then collected after 5-10 minutes from all participants of the study. The "7-items Generalized Anxiety Disordered Scale (GAD-7)" is most popular instrument for detection and screening of anxiety disorders, now a days it is used for screening, diagnosis, and the assessment of anxiety disorders, social phobias, post-traumatic and post pandemic disorders.¹⁵ The seven-item Generalized Anxiety Disorder (GAD-7; range 0-21) was utilized to appraise the severe-ness of symptoms of anxiety.¹⁶ The score (0-4) was considered as normal, (5-9) showed mild anxiety, (10-14) moderate anxiety and (15-21) severe anxiety/depression. The data was entered, rechecked by an expert one for confirmation of correct entry and then analyzed using SPSS version 23. Descriptive statistics was used to check the prevalence and percentage of all quantitative variables, the response rate was 100 percent.

Result:

A total 100 health care providers participated in this study, out of 100 participants, 55 were doctors, 21 were nurses and 24 were para medical staff. Table-I highlight the demographic data of the participants, the mean age of the participants was 29.86 years, the mean age of doctors, nurses and paramedical staff was 30.30, 34.07 and 35.90 respectively. There were 55% female and 45% male in this study. All the health care

Table 2: Prevalence of stress and anxiety in health care provider (n=100)

GAD-7 Score (0-21)	Score 0-4 (Normal)	Score 5-9 (Mild Anxiety)	Score 10-14 (Moderate Anxiety)	Score 15-21 (Severe Anxiety)
HCP (100)	14	33	48	5
Doctors (55)	5	19	27	4
Nurses (21)	5	7	9	0
Para MS (24)	4	7	12	1
Total (100)	14	33	48	5

providers (100%) had some sort of knowledge regarding COVID-19 infectious disease and their preventive measures. Table-II depict the prevalence of stress and anxiety disorders in health care provider (HCP) at Gulab Devi Hospital. The total prevalence in health care provider (HCP) was 86% that is quite high, 33% were suffering from mild anxiety, 48% and 5% were suffering from moderate and severe anxiety respectively. Kruskal-Wallis test was applied to get the P-Value among three groups (doctors, nurses, paramedics) regarding anxiety disorders and it was 0.041, showing significant result of the study, P-Value < 0.05 is said to be statistically significant.

Discussion:

World Health Organization “define Health as a state of physical, mental, and social well-being and not merely the absence of disease or infirmity.”¹⁷ Stress and anxiety disorders including depression are considered to be a normal emotional response to any pandemic condition.¹⁸ According to literature review HCP experienced different degree of stress and anxiety disorders in previous pandemics e.g. SARS, HINI influenza.^{19,20} The psychological effects of COVID-19 pandemic on front line defenders depends on many factors e.g. infectious nature of the disease, spread of virus, lack of knowledge, personal protective equipment’s and medicine.^{21,22} All above mentioned factors are responsible for stress and anxiety disorders of various degree to majority of health care providers (Junior doctors, Nurses and paramedics) who are direct in contact with treating COVID-19 patients.²³ Any pandemic outbreak could affect the cognitive and psycho-

motor skills of HCP both in developed and underdeveloped countries because of transmitting disease and fear of death.²⁴ The prevalence of stress and anxiety observed in HCP in our study was 86% that is significantly high, it could be increasing work load, limited preventive resources, sleep deprivation, lack of knowledge and skills to handle the COVID-19 positive cases and this high prevalence in Pakistan is tallying with others studies.²⁵⁻²⁷

In this study mild degree of anxiety in doctors, nurses and paramedics were observed 34.54%, 33.33% and 29.16% respectively. Moderate degree of anxiety were found in Doctors, Nurses and Paramedics 49.09%, 42.85% and 50.00%. Severe degree of anxiety were only observed in doctors 7.27% and paramedics 4.16%. Females HCP in our study had high prevalence of stress and anxiety disorders as compare to male, previous studies also reported high prevalence in females during pandemic outbreak.^{28,29} The results of our study are high-lighting the urgent proper psychological help to all HCP and immediate necessary measures should be taken to reduce all sort of stresses. Preventive measure of COVID-19 disease e.g. social distancing, limited social activities, quarantine, lock down, face mask are effective in preventing spread of infectious disease, but are amenable in changing the knowledge, attitude and behaviors of HCP and general public.^{12,30,31} Social media is also responsible for provoking stress and anxiety disorders due to spread of incomplete, improper and sometimes wrong information’s to the public.

Conclusions:

The results of our study revealed that significantly high level of stress and anxiety disorders (86%) were observed in health care provider (HCP) during pandemic of COVID-19. The doctors, nurses and paramedics were equally affected in the study. This is an alarming issue and need of the hour to deal this issue both at government and community levels, in order to keep physical and psychological well-being of all Health Care Providers.

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Role and contribution of authors:

Nargis Iqbal conceptualized the idea and made research proposal, and did the initial writeup.

Faiza Nisar, helped in analyzing data and editing.

Amna Rafique collected the data.

Sumera Naseem, collecting the references and also helped in result writing.

Iqbal Ahmad Azhar, conceptualized the idea and made research proposal, and did the initial writeup

M-Zia-ul-Miraj, supervised the study.

Khulood Mukhtar, helped in entering data and made tables.

Nazia Nawaz, helped in entering data and made tables.

Nadia Khurshid, supervised the study.

Najia Anjum supervised the study.

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